Comparisons of Job Characteristics

Focus Occupation: Epidemiologists (19-1041)
Associated Occupation: Biomedical Engineers (17-2031)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge — Similarity of Focus Occupation to Associated Occupation: 38

Focus Occupation: Epidemiologists (19-1041)
Associated Occupation: Biomedical Engineers (17-2031)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Biology	3.7	21.2	16.5	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	21.0	2.6	<<	Extensive education and/or training may be required
Mathematics	9.2	20.2	18.7	0	Current knowledge level may be sufficient
Physics	4.3	17.6	3.1	<<	Extensive education and/or training may be required
Design	5.2	16.6	2.0	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	16.5	13.8	<	Expanded education and/or training may be required
Chemistry	4.8	16.3	6.3	<<	Extensive education and/or training may be required
Medicine and Dentistry	3.7	14.4	12.7	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills — Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Epidemiologists (19-1041)
Associated Occupation: Biomedical Engineers (17-2031)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	17.1	18.2	0	Current skill level may be sufficient
Complex Problem Solving	9.1	15.1	13.9	0	Current skill level may be sufficient
Judgment and Decision Making	9.4	15.1	13.9	0	Current skill level may be sufficient

Operations Analysis	5.0	14.6	9.5	<<	Extensive development of skills in this area may be required
Mathematics	6.2	14.2	11.0	<<	Extensive development of skills in this area may be required
Technology Design	2.6	11.7	2.1	<<	Extensive development of skills in this area may be required
Programming	2.2	10.1	1.8	<<	Extensive development of skills in this area may be required
Installation	1.7	7.5	1.0	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities — Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Epidemiologists (19-1041)
Associated Occupation: Biomedical Engineers (17-2031)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Deductive Reasoning	10.6	17.6	14.6	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	16.8	15.2	<	Some improvement in abilities may be required
Written Comprehension	11.0	16.6	16.0	0	Current ability level may be sufficient
Problem Sensitivity	11.1	16.3	16.2	0	Current ability level may be sufficient
Oral Comprehension	12.5	16.1	16.4	0	Current ability level may be sufficient
Originality	7.6	14.5	10.8	<<	Extensive improvement in abilities may be required
Near Vision	11.1	13.9	11.6	<	Some improvement in abilities may be required
Category Flexibility	9.0	13.6	12.2	<	Some improvement in abilities may be required
Information Ordering	9.9	13.6	11.6	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	13.6	11.5	<	Some improvement in abilities may be required
Visualization	7.5	12.4	7.6	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common — Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Epidemiologists (19-1041)
Associated Occupation: Biomedical Engineers (17-2031)

Work Activities					Exclusivity of Activity

Advise clients or customers	19
Analyze scientific research data or investigative findings	27
Collect scientific or technical data	30
Communicate technical information	4
Confer with research personnel	50
Confer with scientists	54
Develop or maintain databases	30
Develop plans for programs or projects	31
Develop policies, procedures, methods, or standards	21
Develop tables depicting data	33
Direct and coordinate activities of workers or staff	3
Direct and coordinate scientific research or investigative studies	27
Explain complex mathematical information	30
Plan scientific research or investigative studies	48
Prepare reports	8
Prepare technical reports or related documentation	22
Use biological research techniques	68
Use computers to enter, access or retrieve data	3
Use government regulations	44
Use knowledge of investigation techniques	16
Use library or online Internet research techniques	21
Use mathematical or statistical methods to identify or analyze problems	30
Use project management techniques	47
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 74

Focus Occupation: Epidemiologists (19-1041)
Associated Occupation: Biomedical Engineers (17-2031)

Tools and Technologies	Exclusivity
Computers	1
Content authoring and editing software	1
Data management and query software	1
Industry specific software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.